



Contribution ID: 283

Type: **not specified**

Strong baryogenesis

Thursday 24 October 2019 16:20 (20 minutes)

In this talk I will explore a simple model which naturally explains the observed BAU. The strong coupling is promoted to a dynamical quantity, evolving through the VEV of a singlet field which mixes with the Higgs. In the resulting cosmic history, QCD confinement and EWSB occur simultaneously close to the weak scale. The early confinement triggers the axion to roll toward its minimum, and the changing CP-violation is communicated to the weak sector through the eta' meson, resulting in spontaneous baryogenesis. I will identify the regions of parameter space for which the asymmetry is frozen in and relaxation to the Standard Model vacuum occurs before BBN. For these regions, I will also discuss current and future collider and cosmological constraints.

Presenter: CROON, Djuna (University of Sussex)**Session Classification:** Baryogenesis